

Application Serial No.: 10/820,236
Attorney Docket No.: 2156-608A

Examiner: C. Sullivan
Art Unit: 1756

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REMARKS

Claims 1-20 are pending in the present application. Claims 1-5, 10 and 14-16 have been amended and new claims 19 and 20 have been added.

Claim 19 has been added to recite compositions that are usable as the stripping agent for the photoimageable film and support for this feature can be found in the specification, for example at page 9, lines 8-9. Claim 20 has been added to recite the breaking points of the first photoimageable film and the second photoimageable film and support for this feature can be found in the specification, for example at page 5, lines 30-32. No new matter is believed to have been added by virtue of these amendments.

Notice of References Cited

U.S. Patent No. 5,359,928 to Blessington et al. is used by the Examiner in her rejection of claims of the invention. However, this reference is not listed by the Examiner in her Notice of References Cited. Applicants respectfully request that the Examiner provide list this citation on a Notice of References Cited in her next Office Action.

Rejections Under 35 U.S.C. §112

Claims 1-18 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite.

Claims 1, 3, 4, 14, and 15 have been amended to correct the deficiency noted by the Examiner. In particular, claim 1 has been amended to recite that the metal is deposited over both the patterned and the unpatterned areas of the substrate, claims 3 and 4 have been amended to delete information stated in parentheses and to more clearly recite features of the invention, and claims 14 and 15 have been amended to change the dependency of the claims.

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It is believed that these amendments address all of the concerns noted by the Examiner in her Office Action and reconsideration and withdrawal of the rejection of claims 1-18 under 35 U.S.C. § 112, second paragraph is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1-10 and 16-18 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Minter.

The Examiner asserts that Minter describes a process of forming T-shaped metal contacts on a dielectric substrate that anticipates all of the features of the claimed invention.

In response, Applicants have amended claim 1 to more clearly define the invention over the prior art of record. In particular, claim 1 has been amended to recite that the first photoimageable film and the second photoimageable film are photoimageable *dry-film layers*. In addition, claim 1 has been amended to recite that the second photoimageable dry-film layer is laminated over the first photoimageable dry-film layer.

Applicants respectfully submit that Minter does not describe or suggest that the first and photoimageable layers are dry-film layers in the manner described and claimed by Applicants. Minter discloses that the photoresist compositions are deposited by spin coating, dip coating, roller coating, spraying chemical vapor deposition, or meniscus coating (column 7, lines 47-51). Minter does not describe or suggest that the photoresist layers can be dry-film layers as in the present invention.

Reconsideration and withdrawal of the rejection of claims 1-10 and 16-18 as being anticipated by Minter is respectfully requested.

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Claims 1-3 and 16 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Lai.

The Examiner asserts that Lai describes a process of fabricating submicron T-shaped gates for field effect transistors that anticipates all of the steps of the claimed invention.

As discussed above, Applicants have amended claim 1 to recite that the first and second photoimageable layers are dry-film layers. Applicants respectfully submit that Lai does not describe or suggest that the photoimageable layers of their invention are dry-film layers in the manner described and claimed by Applicants. In particular, Lai only discloses the use of spin coated layers (column 1, line 67, through column 2, line 3).

Reconsideration and withdrawal of the rejection of claims 1-3 and 16 as being anticipated by Lai is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 3-4 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Minter in view of Blessington.

The Examiner asserts that Minter describes all of the features of the claimed invention except for the development dwell times and cure speeds of the photoimageable films and uses Blessington to cure the deficiencies of Minter.

As discussed above, Applicants have amended the claims to more clearly define the invention over the prior art. Because claim 1 is believed to be allowable over the prior art of record for the reasons provided above, claims 3 and 4 which depend from claim 1 are also believed to be allowable over the prior art of record.

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Moreover, even if Minter did describe the features of the claimed invention, which Applicants believe it does not, Blessington does not cure the deficiencies of Minter as asserted by the Examiner.

Firstly, Blessington does not describe or suggest two layers of photoimageable material and thus does not describe or suggest the features of the two layers having different properties (i.e., dwell time or curing speed) and does not realize the benefits of the claimed invention in which the difference in development property produces a T-shaped photoresist sandwich that eliminates ragged lines along the interface between the substrate and the photoresist (see page 3, lines 8-13 of the specification).

In addition, Blessington does not describe or suggest dwell times and curing speeds that are within the claimed range for the first and second photoimageable layers. Blessington also does not describe or suggest the units for curing speed used in the present invention and thus does not anticipate or render obvious the claimed curing speeds. In particular, Blessington describes an energy level of about 150-1500 mJ/cm² which is different from the curing speed of 30 to 100 mJ of the first photoimageable dry-film layer and the curing speed of 5 to 20 mJ of the second photoimageable dry-film layer.

For all of these reasons, reconsideration and withdrawal of the rejection of claims 3 and 4 as being unpatentable over Minter in view of Blessington is respectfully requested.

Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Minter in view of Gelorme.

Because claim 1-10 and 16-18 are believed to be allowable over the prior art of record for the reasons provided above, claims 11-13 which depend directly or indirectly from these claims are also believed to be allowable over the prior art of record.

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Reconsideration and withdrawal of the rejection of claims 11-13 as being unpatentable over Minter in view of Gelorme is respectfully requested.

Claims 14-15 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Minter in view of Bhatt.

Because claim 1-10 and 16-18 are believed to be allowable over the prior art of record for the reasons provided above, claims 14-15 which depend directly or indirectly from these claims are also believed to be allowable over the prior art of record.

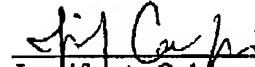
Reconsideration and withdrawal of the rejection of claims 14-15 as being unpatentable over Minter in view of Bhatt is respectfully requested.

CONCLUSION

Applicant believes that the foregoing is a full and complete response to the Office Action of record. Accordingly, an early and favorable reconsideration of all of the claims is requested. Applicant believes that claims 1-20 are now in condition for allowance and an indication of allowability and an early Notice of Allowance of all of the claims is respectfully requested.

If Examiner feels that a telephonic interview would be helpful, she is requested to call the undersigned at (203) 575-2648 prior to the issuance of the next office action.

Respectfully submitted,


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